



# VOLVO

## OIL ANALYSIS REPORT

WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**[4883 IAA]**  
Machine Id  
**VOLVO L90H 623702**  
Component  
**Diesel Engine**  
Fluid  
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)**

### RECOMMENDATION

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VCP438145</b>	VCP396604	VCP375104
Sample Date		Client Info		<b>09 Jan 2024</b>	23 Jan 2023	21 Jul 2022
Machine Age	hrs	Client Info		<b>9535</b>	8975	8523
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

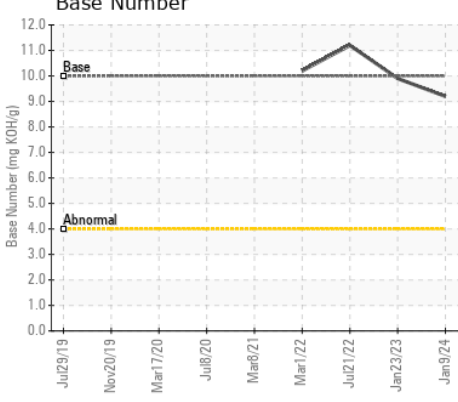
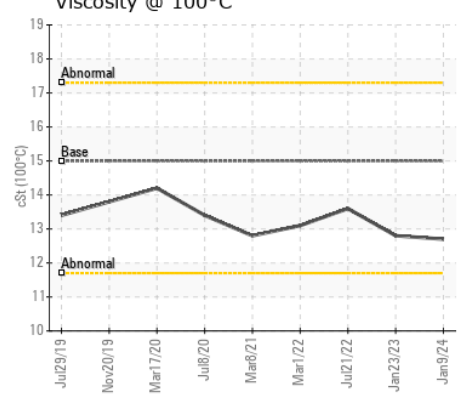
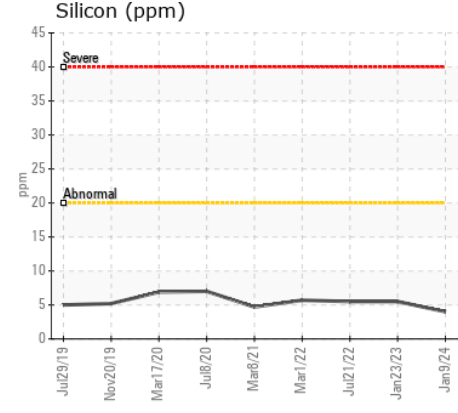
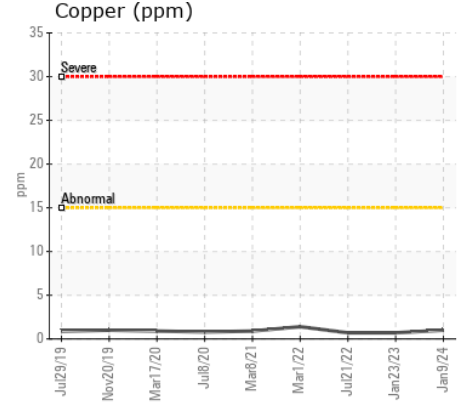
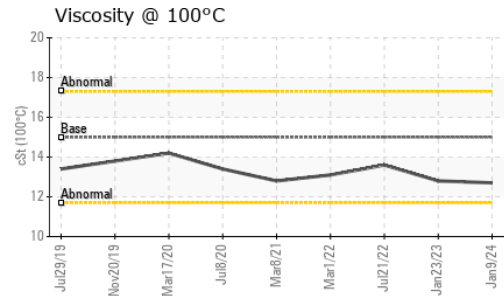
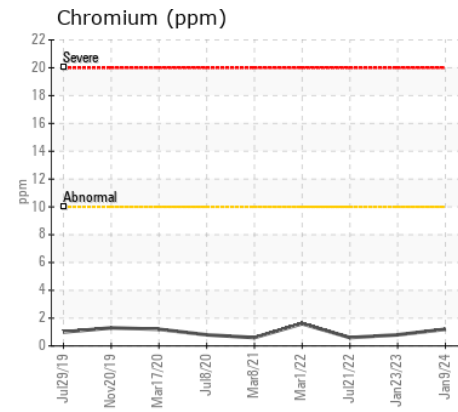
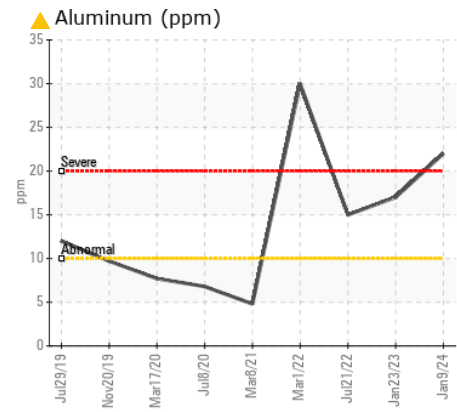
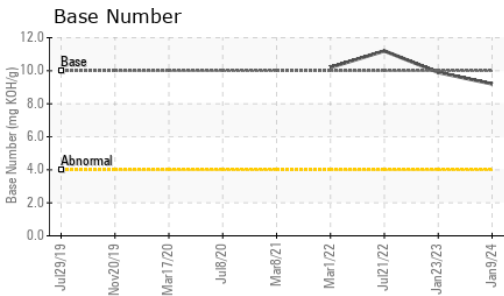
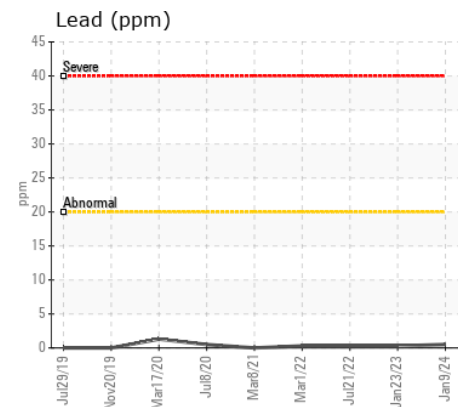
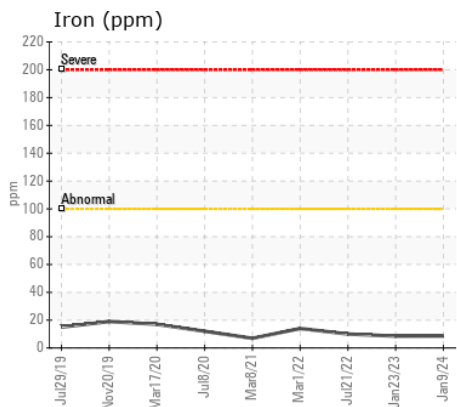
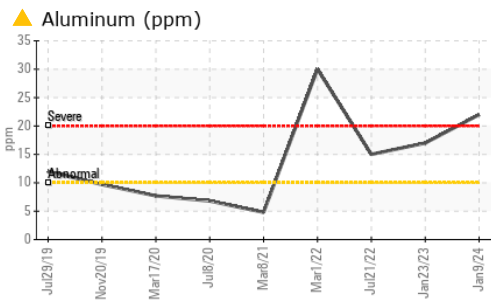
Iron	ppm	ASTM D5185m	>100	<b>9</b>	8	10
Chromium	ppm	ASTM D5185m	>10	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>▲ 22</b>	▲ 17	▲ 15
Lead	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>15	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

Silicon	ppm	ASTM D5185m	>20	<b>4</b>	6	6
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	1
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.7</b>	0.5	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.5</b>	7.7	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.5</b>	22.6	24.3
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

Sodium	ppm	ASTM D5185m		<b>0</b>	2	0
Boron	ppm	ASTM D5185m	2.5	<b>0</b>	36	33
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.7	<b>51</b>	42	46
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	256	<b>829</b>	517	509
Calcium	ppm	ASTM D5185m	2057	<b>1262</b>	1651	1854
Phosphorus	ppm	ASTM D5185m	935	<b>1017</b>	887	986
Zinc	ppm	ASTM D5185m	1223	<b>1250</b>	1065	1178
Sulfur	ppm	ASTM D5185m	4079	<b>3080</b>	3374	3603
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.9</b>	21.2	22.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>9.2</b>	9.9	11.2
Visc @ 100°C	cSt	ASTM D445	15.0	<b>12.7</b>	12.8	13.6



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP438145 **Received** : 12 Jan 2024  
**Lab Number** : 06059055 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10830437 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**ALTA EQUIPMENT/FLAGLER EQUIPMENT LLC**  
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Certificate L2367  
 To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)